

RECEIVED
CENTRAL FAX CENTER

OCT 06 2006

Docket No. F-8524

Ser. No. 10/519,730

AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Currently Amended) An R switch for switching connections between microwave waveguides on and off comprising:

~~a~~ an essentially parallelepiped stator having four side surfaces of which each have ~~a central~~ a connection opening for connecting to one of said a microwave ~~waveguide~~ waveguides,

a rotor rotatably disposed in ~~[[the]]~~ an interior of ~~[[a]]~~ said stator with ~~[[its]]~~ an axis of rotation coaxial with ~~the longitudinal~~ an axis of the stator and which has a centrally disposed straight interconnection and two curved paths on either side of the straight interconnection thereof and which is rotatable to rotational positions effecting interconnections of said connection openings,

~~openings of the straight interconnection and curved paths being~~ having end ~~openings~~ disposed in such a manner that, ~~depending on the rotational position of a rotor, each opening~~ the end openings are selectably connectable to said connection openings by rotating said rotor to respective ones of said rotational positions whereat ~~can be connected through over the straight interconnection interconnects opposing ones of said connection openings or over one of the curved~~

Docket No. F-8524

Ser. No. 10/519,730

~~paths to each of the other three openings~~ respectively interconnect pairs of adjacent ones of said connection openings,

the straight interconnection being constructed as ~~a step transformers~~ transformer,

the straight interconnection extending in a longitudinal direction between said end openings, and

the step transformer of the straight interconnection being formed ~~bar-like by recesses incorporated in the steps by opposing steps, and said steps defining~~ recesses extending in said longitudinal direction and bar shaped.

2. (Currently Amended) The R switch of claim 1, wherein the step transformer of the straight interconnection is constructed multi-stepped and ~~the~~ recesses are incorporated on either side of [[the]] a last step of the steps in the step transformer.

3. (Currently Amended) The R switch of claim 1, wherein the step transformer of the straight interconnection is constructed multi-stepped and recesses are incorporated on either side of all the steps in the step transformer.

4. (Currently Amended) The R switch of claim 1, wherein the step transformer of the straight interconnection is constructed multi-stepped and the

Docket No. F-8524

Ser. No. 10/519,730

recesses are incorporated on one side of ~~[[the]]~~ a last step of the steps in the step transformer.

5. (Currently Amended) The R switch of claim 1, wherein the step transformer of the straight interconnection is constructed multi-stepped and recesses are incorporated on one side of all the steps in the step transformer.

6. (Currently Amended) ~~[[The]]~~ An R switch for switching connections between microwave waveguides on and off comprising:

~~a~~ an essentially parallelepiped stator having four side surfaces each of which have ~~a central~~ a connection opening for connecting to one of said ~~[[a]]~~ microwave waveguide waveguides,

a rotor rotatably disposed in ~~[[the]]~~ an interior of ~~[[a]]~~ said stator ~~[[(2)]]~~ with ~~[[its]]~~ an axis of rotation coaxial with ~~the longitudinal~~ an axis of the stator and which has a centrally disposed straight interconnection and two curved paths on either side of the straight interconnection thereof and which is rotatable to rotational positions effecting interconnections of said connection openings.

~~openings of the straight interconnection and curved paths being~~ having end openings disposed in such a manner that, ~~depending on the rotational position of the rotor, each opening~~ the end openings are selectively connectable to said connection openings by rotating said rotor to respective ones of said rotational

Docket No. F-8524

Scr. No. 10/519,730

positions whereat ~~can be connected through over~~ the straight interconnection interconnects opposing ones of said connection openings or ~~over one of the curved~~ paths to each of the other three openings respectively interconnect pairs of adjacent ones of said connection openings,

the straight interconnection and the curved paths each being constructed as step transformers, and extending in a longitudinal direction between said end openings, and

the step transformer of the straight interconnection being constructed multi-stepped and ~~recesses are incorporated on either side of the~~ a last step in the step transformer defining recesses on either side of the last step extending in said longitudinal direction.

7. (Canceled)

8. (Currently Amended) The R switch of claim 6, wherein the step transformer of the straight interconnection is constructed multi-stepped and the recesses are incorporated on either side of all the steps in the step transformer of the straight interconnection.

9. (Currently Amended) The R switch of claim 6, wherein the step transformers of the curved paths are constructed multi-stepped and recesses are

Docket No. F-8524

Ser. No. 10/519,730

incorporated on either side of [[the]] a last step in the step transformers of the curved paths.

10. (Currently Amended) The R switch of claim 6, wherein the step transformers of the curved paths are constructed multi-stepped and recesses are incorporated on either side of all steps in the step transformers of the curved paths.

11. (Currently Amended) The R switch of claim 6, wherein the step transformer of the straight interconnection is constructed multi-stepped and the recesses are incorporated on one side of [[the]] a last step of the steps in the step transformer of the straight interconnection.

12. (Currently Amended) The R switch of claim 6, wherein the step transformer of the straight interconnection is constructed multi-stepped and the recesses are incorporated on one side of all the steps in the step transformer of the straight interconnection.

13. (Currently Amended) The R switch of claim 6, wherein the step transformers of the curved paths are constructed multi-stepped and recesses are incorporated on one side of [[the]] a last step in the step transformers of the curved paths.

Docket No. F-8524

Ser. No. 10/519,730

14. (Currently Amended) The R switch of claim 6, ~~characterized and that~~
wherein the step transformers of the curved paths are constructed multi-stepped and
recesses are incorporated on one side of all steps in the step transformers of the
curved paths.

15. (New) An R switch for switching connections between microwave
waveguides, comprising:

a stator having an interior cavity and four connection openings
communicating with said interior cavity, each of said connection openings being
respectively disposed on one of four side surfaces of said stator, said side surfaces
being arranged in opposing pairs, said connection openings being configured to
connect to the microwave waveguides;

a rotor rotatably disposed in the interior cavity;

said rotor having a centrally disposed straight interconnection configured
to interconnect opposing ones of said connection openings when said rotor is
positioned at a first rotation position;

said rotor having first and second curved interconnections respectively
disposed on opposing sides of the straight interconnection, said first curved path
being configured to interconnect first and second connection openings of said
connection openings which are disposed on adjacent ones of said four side surfaces
when said rotor is positioned at a second rotation position different than said first

Docket No. F-8524

Scr. No. 10/519,730

rotation position, said second curved interconnection being configured to interconnect third and fourth connection openings of said connection openings which are disposed on other adjacent ones of said four side surfaces when said rotor is positioned at said second rotation position;

the straight interconnection being constructed as a step transformer,

the straight interconnection having end openings, first and second opposing walls, and second and third opposing walls, and extending in a longitudinal direction between said end openings, and

the step transformer of the straight interconnection being formed by opposing first and second steps on said first and second walls, and said first and second steps defining recess spaces between longitudinally extending step sides of said first and second steps and at least one of said third and fourth walls opposing said longitudinally extending sides.

16. (New) The R switch of claim 15, wherein said first and second steps respectively have first step ends and second step ends and said recess spaces extend from said first step ends to said second step ends.

17. (New) The R switch of claim 16, wherein the step transformer of the straight interconnection is constructed multi-stepped and the first and second steps are innermost steps of said step transformer.

Docket No. F-8524

Ser. No. 10/519,730

18. (New) The R switch of claim 17, wherein the step transformer of the straight interconnection is constructed multi-stepped and said recess spaces are defined by all steps in the step transformer including said first and second steps.

19. (New) The R switch of claim 17, wherein steps of the step transformer of the straight interconnection other than said first and second steps do not define said recess spaces.

20. (New) The R switch of claim 19, wherein said longitudinally extending step sides include sides on both longitudinal sides of each of all said steps and said recess spaces are defined between said longitudinally extending step sides and both of said third and fourth walls opposing respective ones of said longitudinally extending sides.

21. (New) The R switch of claim 17, wherein said longitudinally extending step sides include sides on both opposing longitudinal sides of said first and second steps and said recess spaces are defined between said longitudinally extending step sides on both said sides and both of said third and fourth walls opposing respective ones of said longitudinally extending sides.

Docket No. F-8524

Ser. No. 10/519,730

22. (New) The R switch of claim 16, wherein said longitudinally extending step sides include sides on both longitudinal sides of said first and second steps and said recess spaces are defined between said longitudinally extending step sides on both said sides and both of said third and fourth walls opposing respective ones of said longitudinally extending sides.